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**STUDY OF THE EFFECTS OF AEROSOLIZED BACTERIAL VACCINES ON THE IMMUNE RESPONSE TO SUBCUTANEOUSLY ADMINISTERED ANTIGENS**

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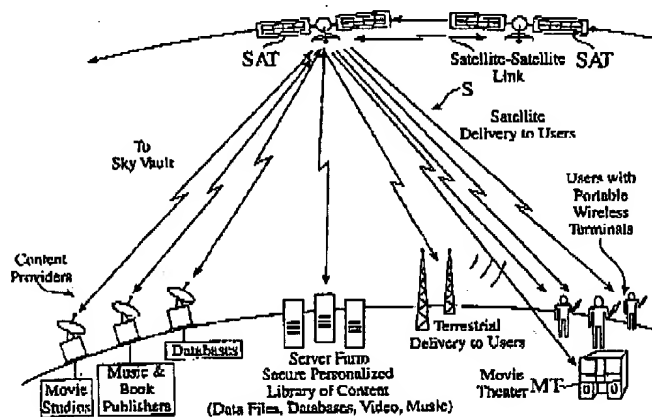
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*(Continued on next page)*

- (54) Title: METHOD FOR UTILIZING EXCESS COMMUNICATIONS CAPACITY



(37) **Abstract:** Methods and apparatus for the secure and copy-proof distribution of data are disclosed. In one embodiment of the invention, a network of satellites in low Earth orbit are used to convey packets of data from ground stations to set-top boxes installed in residences. The data is conveyed from the ground stations and to the set-top boxes during times when the network capacity is not fully utilized. The packets of data which are transmitted from the ground stations to the satellites, and then to the subscribers, are heavily encrypted. This data is always confined to the secure network, and is never introduced to the Internet or other public networks. The data conveyed by the present invention may be video or audio programming, business data, or any other type of information. Upon arrival at the subscriber's premises, the received signals may be decrypted, but are not capable of being copied, since the receiver does not include any external disc or tapes drives or output ports.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/14828

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04B7/185 H04L12/56 H04J3/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04J H04N G06F H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 864 557 A (LYONS PAUL WALLACE) 26 January 1999 (1999-01-26)  column 1, line 27 - line 33 column 2, line 39 - line 51 figure 1	1,9-11, 16-22, 58-53, 106,133
Y		2-8,14, 15,23,24
Y	WO 97 18651 A (HUGHES AIRCRAFT CO) 22 May 1997 (1997-05-22) page 1, line 11 - line 18 figure 1	2-8,14, 15,23,24

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

3 December 2001

Date of mailing of the international search report

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Form PCT/ISA/210 (second sheet) (July 1992)

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/14828**Box I** Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 81-96, 98-105  
because they relate to subject matter not required to be searched by this Authority, namely:  
The claims relate to business methods which are excluded from search under Rule 39.1(iii) PCT.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II** Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-11, 14-24, 50-53, 106, 133

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (1)) (July 1998)

International Application No. PCT/US 01/14828

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## 1. Claims: 1-11,14-24,50-53,106,133

Methods, system, signal, and apparatus by which data is transferred using otherwise unused capacity of a network and by which data is accumulated for retrieval subsequent to the accumulation period.

## 1.1. Claims: 1,11,50,106,133

Methods, system, signal, and apparatus by which data is transferred using otherwise unused capacity of a network and by which data is accumulated for retrieval subsequent to the accumulation period.

## 1.2. Claims: 25,54

Transmission means transmitting digitized packets over a network with encryption and decryption, secure storage means and reproducing means.

## 2. Claims: 12, 13

A system according to claim 11 and in which the receiver is shielded to eliminate local radio frequency transmissions. A system according to claim 11 and in which the receiver means is tamper-proofed.

## 3. Claims: 97,107,108,109

A method or apparatus for transmitting (digitized packets of) data over a network, receiving it, accumulating it over an extended period of time, storing it and retrieving it after accumulation, wherein the data is inserted into television picture lines or into a television subcarrier.

## 4. Claims: 110-114

A method or apparatus for transmitting (digitized packets of) data over a network, receiving it, accumulating it over an extended period of time, storing it and retrieving it after accumulation, wherein the data is broadcast over AM or FM radio.

## 5. Claims: 115-132

A method or apparatus for transmitting (digitized packets of) data over a network, receiving it, accumulating it over an extended period of time, storing it and retrieving it after accumulation, wherein the data is secure, personalized files stored on a remote server farm.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

**6. Claims: 25-49,54-80,134**

Claims 25-49,54-80: Transmission means transmitting digitized packets over a network with encryption and decryption ensuring decoding only by authorized users, secure storage means and reproducing and displaying means.

Claim 134: An apparatus comprising means for requesting data, first and second stores, means for receiving data packets and assembling them during selected periods either in the first store or the second store and selectively providing data from either the first or second store to the user.

## INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 01/14828

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